EAST Search History

L13	785	12 and ("batteries" same (diode or SCR or switch$2 or FET or MOSFET)).	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 18:50
L14	593	13 and ((diode or SCR or switch$2 or FET or MOSFET) same (Controll$3 or manage$4 or supervis$4 or evaluat$4 or process$3 or logic or CPU or (central adj processing adj unit) or CPU or computer or microcontroller or microprocessor or (micro adj processing) or ECU or (electronic adj control adj unit) or PLC or (programmable adj logic adj controller) or PLD or (programmable adj logic adj device)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 18:53
L15	58	("6229279" "6275001" "5825100" "6222341" "6271642" "6734651")	US-PGPUB; USPAT	OR	ON	2008/01/21 18:56
L16	1402	320/103 or 320/104 or 320/126	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 18:56
L17	380	L16 and (battery same (diode or SCR or FET OR MOSFET or transistor or BJT or IGFET) same switch$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 18:56
L18	362	L17 and (battery same charg$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 18:56
L19	551	14 NOT (L15 or L18)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 18:56

L20	320	19 and (starter or (engine with start$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 18:58
L21	1	17 and ((three way switch) or (single pole triple throw) or SPTT)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2008/01/21 19:52
L22	2	19 and ((three way switch) or (single pole triple throw) or SPTT)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2008/01/21 19:52
L23	320	19 and (starter or (engine with start$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 19:53
L25	784	307/10.6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 19:54
L26	217	L25 and (battery same charg$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 19:55
L27	54	26 and ((Dual or twin or multi or multiple or "more than one" or secondary or redundant or backup or auxiliary or reserve or accessory or emergency or alternate or alternative) near battery)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 19:55

| L28 | 0 | (vehicle multiple battery system operating vehicle electrical system connected between system positive system negative terminal system comprising main battery having main positive output coupled least one switching device having two operating positions main negative output least one standby battery having one standby positive output coupled switching device least one standby negative output coupled vehicle electrical system negative terminal main electrical circuit comprisingcoupling system positive terminal one switching device one switching device having two operating positions selectivelyexclusively couple either main one standby battery positive output system positive terminal start operate vehicle electrical system first operating position two operating positions electrical power provided exclusively main battery startup vehicle electrical system main battery recharged vehicle electrical system one one-way charging circuit receives electrical power from the vehicle electrical system one one way charging circuit simultaneously recharging one standby battery without permitting least one standby battery engaged start the vehicle electrical system operate the vehicle electrical system electrically couple main battery second operating position wo operating positions main battery electrically isolated one way charging circuit one standby battery one standby battery exclusively provides electrical power controller coupled main electrical circuit one-way charging circuit controller switching one switching device input from an at least one sensor selectively and exclusively provide power switch positions as enumerated main battery and the standby battery never supply electrical energy vehicle electrical system simultaneously).CLM. | US-PGPUB | AND | ON | 2008/01/21 20:04 |

| L29 | 0 | (vehicle multiple battery system operating vehicle electrical system connected between system positive system negative terminal system comprising main battery having main positive output coupled least one switching device having two operating positions main negative output least one standby battery having one standby positive output coupled switching device least one standby negative output coupled vehicle electrical system negative terminal main electrical circuit comprisingcoupling system positive terminal one switching device one switching device having two operating positions selectivelyexclusively couple either main one standby battery positive output system positive terminal start operate vehicle electrical system first operating position two operating positions electrical power provided exclusively main battery startup vehicle electrical system main battery recharged vehicle electrical system one one-way charging circuit receives electrical power from the vehicle electrical system one one way charging circuit simultaneously recharging one standby battery without permitting least one standby battery engaged start the vehicle electrical system operate the vehicle electrical system electrically couple main battery second operating position wo operating positions main battery electrically isolated one way charging circuit one standby battery one standby). CLM. | US-PGPUB | AND | ON | 2008/01/21 20:05 |

L30	0	(vehicle multiple battery system operating vehicle electrical system connected between system positive system negative terminal system comprising main battery having main positive output coupled least one switching device having two operating positions main negative output least one standby battery having one standby positive output coupled switching device least one standby negative output coupled vehicle electrical system negative terminal main electrical circuit comprisingcoupling system positive terminal one switching device one switching device having two operating positions selectivelyexclusively couple either main one standby battery positive output system positive terminal start operate vehicle electrical system first operating position two operating positions electrical power provided exclusively main battery startup vehicle electrical system main battery recharged vehicle electrical system one one-way charging circuit receives electrical power).CLM.	US-PGPUB	AND	ON	2008/01/21 20:05
S1	15	("5,164,273" "5,169,735" "5,204,610" "5,223,351" "5,767,658" "5,986,43").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/28 15:36
S2	14	("6229279" "6275001" "5825100" "6222341" "6271642" "673465").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/28 17:53
S3	67	("1588803" "3029301" "3475221" "3742302" "3758345" "3763415" "4041363" "4082992" "4157492" "4239839" "489242" "4684580" "4746853" "4869688" "4883728" "4949028" "5002840" "5108848" "5154985" "516216").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/28 17:54

S5	19	("1588803" "3029301" "3475221" "3742302" "3758345" "3763415" "4041363" "4082992" "4157492" "4239839" "489242" "4684580" "4746853" "4869688" "4883728" "4949028" "5002840" "5108848" "5154985" "5162164").PN.	USPAT	OR	ON	2007/05/28 18:25
S7	0	"489242" and Worst.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/28 18:06
S9	20	("5194799" "5225761" "5256502" "5264777" "5352966" "5418444" "5448152" "5487956" "5496654" "5549984" "5576612" "5683827" "5726553" "5844325" "5866274" "5993983" "6046514" "6121750" "6181100" "6198249").PN.	USPAT	OR	ON	2007/05/28 19:02
S10	16	("6222341" "6222342" "6229279" "6271642" "6323608" "6384573" "6476583" "6507169" "6545445" "6597150" "6639384" "6734651" "20010043052" 2OO3OO62773 "20040113589" "20040192407" "3200014").PN.	US-PGPUB; USPAT	OR	ON	2007/05/28 19:22
S11	1	("20030062773").PN.	US-PGPUB; USPAT	OR	ON	2007/05/28 19:22
S12	71188	"320"/$.ccls. or "307"/$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/05 16:00
S13	8351	S12 and (battery and diode and switch$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/05 16:00
S14	315	S13 and ((vehicle or electrical or automobile) and (start$3 near system))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/05 16:02

S15	315	S14 and ((dual or twin or multi or multiple or "more than one") near (power near (supply or source or unit or system or cell or module)) or battery)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/05 16:06
S16	6	S15 and (isolated battery)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2007/06/05 16:16
S17	12	S15 and (isolated battery)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	NEAR	ON	2007/06/05 16:20
S18	6	S17 NOT S16	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	NEAR	ON	2007/06/05 16:17
S19	25	S15 and (isolated battery)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2007/06/05 16:20
S20	19	S19 NOT S18	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2007/06/05 16:46
S21	78	("4516066" "4924176" "6639384" "6727602" "5316868")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/05 16:59
S22	66	("4516066" "4924176" "6639384" "6727602" "5316868")	USPAT	OR	ON	2007/06/05 16:59
S23	8	((DAVID) near2 (ELDER)).INV.	USPAT	OR	ON	2007/06/06 18:40

EAST Search History

S25	38	((DAVID) near2 (ELDER)).INV.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/06 18:14
S26	1	"6,977,482".pn.	USPAT	OR	ON	2007/06/06 18:40
S27	7065	(battery diode switch$3).AB.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/06/06 21:30
S29	473	320/103	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/06/06 21:30
S30	7	S29 and (battery diode switch$3).AB.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/06/06 21:45
S31	107	S29 and (battery diode switch$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	SAME	ON	2007/06/06 21:45
S33	100	S31 NOT S30	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	SAME	ON	2007/06/07 10:17
S50	2	"US 20050275374"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2008/01/18 12:27
S51	2	("6313605" "5726551").pn.	US-PGPUB; USPAT	OR	ON	2008/01/18 12:42

S52	67	("1588803" "3029301" "3475221" "3742302" "3758345" "3763415" "4041363" "4082992" "4157492" "4239839" "489242" "4684580" "4746853" "4869688" "4883728" "4949028" "5002840" "5108848" "5154985" "516216").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/18 17:40
S53	56	("1588803" "3029301" "3475221" "3742302" "3758345" "3763415" "4041363" "4082992" "4157492" "4239839" "489242" "4684580" "4746853" "4869688" "4883728" "4949028" "5002840" "5108848" "5154985" "5162164" "5194799" "5225761" "5256502" "5264777" "5352966" "5418444" "5448152" "5487956" "5496654" "5549984" "5576612" "5683827" "5726553" "5844325" "5866274" "5993983" "6046514" "6121750" "6181100" "6198249" "6222341" "6222342" "6229279" "6271642" "6323608" "6384573" "6476583" "6507169" "6545445" "6597150" "6639384" "6734651" "20010043052" "20030062773" "20040113589" "20040192407" "3200014").PN.	US-PGPUB; USPAT	OR	ON	2008/01/20 21:10
S54	562	("1588803" "3029301" "3475221" "3742302" "3758345" "3763415" "4041363" "4082992" "4157492" "4239839" "489242" "4684580" "4746853" "4869688" "4883728" "4949028" "5002840" "5108848" "5154985" "5162164" "5194799" "5225761" "5256502" "5264777" "5352966" "5418444" "5448152" "5487956" "5496654" "5549984" "5576612" "5683827" "5726553" "5844325" "5866274" "5993983" "6046514" "6121750" "6181100" "6198249" "6222341" "6222342" "6229279" "6271642" "6323608" "6384573" "6476583" "6507169" "6545445" "6597150" "6639384" "6734651" "20010043052" "20030062773" "20040113589" "20040192407" "3200014")	US-PGPUB; USPAT	OR	ON	2008/01/20 23:28
S55	506	S54 NOT S53	US-PGPUB; USPAT	OR	ON	2008/01/20 23:29
S56	58	("6229279" "6275001" "5825100" "6222341" "6271642" "6734651")	US-PGPUB; USPAT	OR	ON	2008/01/21 14:29

EAST Search History

S57	6	("5,164,273" "5,169,735" "5,204, 610" "5,223,351" "5,767,658" "5, 986,431").pn.	US-PGPUB; USPAT	OR	ON	2008/01/21 15:11
S58	1402	320/103 or 320/104 or 320/126	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 15:13
S60	380	S58 and (battery same (diode or SCR or FET OR MOSFET or transistor or BJT or IGFET) same switch$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 15:14
S61	362	S60 and (battery same charg$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/21 15:14